NACSP Strategic Work Plan

2013-2017

Summary List of Objectives for each Focus Area Team

FOCUS AREA 1: **Rio Grande-Rio Bravo (RGB) Regional Pilot Area**

Description: To develop and deliver drought-based climate services in order to assist water resource managers, agricultural interests, and other constituents within the basin as they respond to future drought events and build capacity to respond to other climate extremes.

Objective 1.1 Observations and Monitoring: Assess and enhance the distribution and quality of regional observational climate networks

Objective 1.2 North American Drought Monitor: Improve the overall awareness and effectiveness of this product in the RGB

Objective 1.3 Outlooks and Forecasts: Enhance collaboration on existing operational climate outlook and prediction products

Objective 1.4 Drought Impacts: Enhance the ability of North America to monitor and report on impacts from drought

FOCUS AREA 2: **Great Lakes Regional Pilot Area**

To provide products and services that assist stakeholders assess actual and future states of water resources in the GLSLR basin.

Objective 2.1 Monitoring, Research and Modelling: Reduce uncertainty in estimates of observed Great Lakes –St. Lawrence River (GLSLR) water supplies, and improve skill in forecasting future water supplies, provide climate change hydroclimate information for Great Lakes stakeholders.

Objective 2.2 Climate Summaries and Outlooks: Enhance binational collaboration on existing seasonal climate summary and outlook products

FOCUS AREA 3: **North American Ensemble Forecast System (NAEFS)**

To improve Operational day 1-16 predictions for North America by combining different Ensemble Prediction Systems into a super Ensemble.

Objective 3.1 Ensemble forecast system comparison

Objective 3.2 Exchange higher resolution (0.5 degree) ensemble forecast data

Objective 3.3 Development/improvement of common post process for multi-model ensemble

Objective 3.4 Development and assessment specialized products useful for decision makers (e.g. probabilistic forecasts)

Objective 3.5 Expand the Data exchange to the Regional Ensemble Systems

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FOCUS AREA 4: **North American Seasonal Forecast System (NASFS)**

To improve seasonal and multi-seasonal predictions for North America by combining different models of known performance to leverage on existing models to improve skills.

Objective 4.1 Continue with current National Multi-Model Ensemble (NMME) research/experimental project towards improved seasonal forecast products over North America and continued delivery of real-time experimental products.

Objective 4.2. Reach mutual trilateral agreement (between Mexico, Canada and USA) about an Operational partnership on a shared Seasonal Prediction System as an outcome of NMME

Objective 4.3 Make the transition from NMME to Operations

Objective 4.4 Develop NMME future 5-year plan to enhance NMME capabilities to better meet user needs and Evaluate the potential applications of NMME forecast from both, technical and end-user perspectives

FOCUS AREA 5:　　　**North America Drought Monitor (NADM)**

To provide map and narrative products that assess drought conditions on a continental scale which assist water resource managers, agricultural interests, and other user communities in the United States, Mexico, and Canada to respond to current and future drought events.

Objective 5.1　　Scoping Activity: Develop a discussion paper that identifies the role of the NADM and how it links to other global drought information initiatives, programs, policy and science in North America. The analysis will be done by country (i.e., each country to contribute its own section to the paper).

Objective 5.2　　North American VegDRI: Expand the Vegetation Drought Reponse Index (VegDRI) drought product (which currently covers just the contiguous U.S.) to Canada and Mexico so that it covers the full North American continent.

Objective 5.3　　North American Blended Drought Indices: Develop short- and long-term objective blended drought indices for the entire North American continent (utilizing data from Canada, Mexico, and the U.S.) patterned after the methodology for the U.S. objective blends.

Objective 5.4　　Drought Definitions and Indices Study: Link to the GEO North American Drought Indices and Definition study, which is developing a user toolkit consisting of a North American relevant definition for drought and identification of suitable indices. This would be a first step in development of a globally relevant definition and identification of indices.

FOCUS AREA 6: Coordinated Global Daily Precipitation Analysis

To provide a coordinated North American and global daily precipitation analysis product for use in environmental prediction systems and for quantitative precipitation forecast verification on North American and global scale

Objective 6.1　　Coordination of observations: Gather information on existing observational networks in North America which provide information on precipitation and find a reliable mechanism for sharing observations from these networks between the three countries.

Objective 6.2　　Coordination of skill assessment: Develop a methodology and dataset for assessing the skill of North American and global precipitation analysis systems being used by the three countries.

Objective 6.3   Coordination of methodology: Agree upon and implement an algorithm which can be used to obtain a coordinated North American and global daily precipitation analysis.

Objective 6.4   Coordination of services: Ensure that the coordinated global analysis meets the operational requirements of other focus area in the North American Climate Services Partnership and is available in a convenient and timely manner to end-users.

FOCUS AREA 7: North American Seasonal Fire Assessment and Outlook

To establish an ongoing international partnership for providing weather, climate, and fuels information, and their effects on wildland fire activity in support of operational wildland fire management in North America.

Objective 7.1   Decision support: Provide detailed assessments of long-range weather and climate trends, evolution of fuels states, and fire potential for wildland fire management decision makers across North America.

Objective 7.2   Products and services: Continue developing products and services for wildland fire managers that address the changing environments affecting fire.

Objective 7.3   Knowledge sharing: Improve collaboration with climate experts in other focus areas such as observation and monitoring, drought, modeling, and seasonal forecasting.

Program of Work: Detailed List of Activities for each Focus Area Team

FOCUS AREA	OBJECTIVES	ACTIVITIES/MILESTONES	TIME FRAME	LEAD	Strategic Goal & GFCS Link
1. **Rio Grande / Rio Bravo Regional Pilot Area**	1.1 Observations and Monitoring: *Enhancing the early detection, assessment, and reporting of climate extremes and their impacts*	1.1.1 Clarify technical descriptors of climate and drought, such as defining "persistence", "flash drought" and other phenomena using criteria specific to the RGB 1.1.2 Create RGB-specific temperature and precipitation products (time series, percent of normal, indices, etc.) for use in monitoring 1.1.3 Assess the availability and quality of existing climate- and drought-specific products in the RGB, at both regional and national scales 1.1.4 Assess the extent, quality, and capacity of observational climate networks in RGB, to include an inventory of existing networks, identification of gaps in coverage and quality control issues, and facilitation of improved bilateral data sharing	1.1.1 1-2 years 1.1.2 1-2 years 1.1.3 2-3 years 1.1.4 2-3 years	**Mexico** Reynaldo Pascual Carlos Garrido Ramón Lira **US** Greg Shelton (co-lead) Kelly Redmond (co-lead) Victor Murphy Kevin Robbins	**NACSP Strategic Goals:** #2. Maximize the use of existing science and information by decision-makers #3. Prioritize activities based on gaps in service delivery and end-user input #4. Utilize regional pilot areas to implement a place-based approach **GFCS Pillars:** #1. Climate Observations and Monitoring
	1.2 North American Drought Monitor: *Enhancing its usability at regional scales*	1.2.1 Use existing GIS tools and capacity to create an RGB-specific drought monitor "cut out" from the monthly NADM 1.2.2 Identify opportunities to better incorporate drought impact information within the RGB into the NADM (e.g., RGB impact reporter) 1.2.3 Leverage existing U.S. state and Mexican drought monitoring coordination efforts to inform an RGB-specific drought monitor product, in parallel to the NADM	1.2.1 1 year 1.2.2 1-2 years 1.2.3 2-3 years	**Mexico** Reynaldo Pascual Adelina Albanil **US** Richard Heim (co-lead) Mark Svoboda (co-lead)	**NACSP Strategic Goals:** #2. Maximize the use of existing science and information by decision-makers #4. Utilize regional pilot areas to implement a place-based approach #5. Create opportunities to share best practices and lessons learned

FOCUS AREA	OBJECTIVES	ACTIVITIES/MILESTONES	TIME FRAME	LEAD	Strategic Goal & GFCS Link
				Dave DuboisJohn Nielsen-Gammon	**GFCS Pillar:** #1. Climate Observations and Monitoring
	1.3 Outlooks and Forecasts: Enhance collaboration on existing and new operational climate outlook and prediction products at regional scales	1.3.1 Continue coordination efforts (site visits, workshops) between U.S. and Canadian climate forecasters with emphasis on regional-scale opportunities and applications where possible, using the RGB as a test bed 1.3.2 Establish a prototype RGB climate outlook product (monthly or quarterly) that also includes current and historical impact information, and develop evaluation tools to assess the utility of the prototype 1.3.3 Convene an RGB climate adaptation workshop to examine strategies for assessing climate uncertainty at seasonal and long-lead time scales using scenario planning tools 1.3.4 Utilize North American prototype outlook information (e.g., NAEFS, NASFS, NA Seasonal Fire Outlook) to inform and enhance RGB outlook activities	1.3.1 1 year 1.3.2 1 year 1.3.3 1 year 1.3.4 2-3 years	**Mexico** Jorge Luis Vázquez Martín Ibarra Brenda Bello **US** Gregg Garfin (co-lead) Dan Collins (co-lead) Mark Shafer	**NACSP Strategic Goals:** #1. Foster the development of key partnerships with users and stakeholders #2. Maximize the use of existing science and information by decision-makers #4. Utilize regional pilot areas to implement a place-based approach #5. Create opportunities to share best practices and lessons learned **GFCS Pillar:** #3. Climate Services Information Systems
	1.4 Drought Impacts: Enhance the identification, reporting, and analysis of environmental and economic impacts of drought at regional scales	1.4.1 Utilize partners and constituents within the RGB geography to "ground truth" drought impacts, as part of the reporting process for national and North American drought monitor products 1.4.2 Develop a prototype regional drought impact reporting system for the RGB, one that includes a focus on training observers, corroborating impact information with other sources, and improving the understanding of	1.4.1 2-3 years 1.4.2 3 years	**Mexico** Adelina Albanil Carmen Hoechst Régulo Nájera **US** Gregg Garfin (co-lead) Mark Svoboda (co-lead)	**NACSP Strategic Goals:** #1. Foster the development of key partnerships with users and stakeholders #4. Utilize regional pilot areas to implement a place-based approach

FOCUS AREA	OBJECTIVES	ACTIVITIES/MILESTONES	TIME FRAME	LEAD	Strategic Goal & GFCS Link
		ecosystem services with respect to drought		Richard Heim (co-lead)	**GFCS Pillar:** #5. User Interface Platform
2. Great Lakes Regional Climate Service Partnership	2.1 Monitoring, Research and Modelling:	2.1.1 Draft and implement Great Lakes Water Quality Agreement (GLWQA), Annex 9 (climate change impacts) workplan • Assess state of Great Lakes climate change knowledge to identify priorities and gaps in hydroclimate monitoring, research and modelling • Identify how improved regional scale climate modelling, climate monitoring, analytic tools and coordinated science are needed for meeting other Annex commitments 2.1.2 Continue Great Lakes data coordination via Coordinating Committee on Great Lakes Basic Hydraulic and Hydrologic Data 2.1.3 Develop a "GEOSS for the Great Lakes," by supporting enhanced and expanded data exchange and access, with Great Lakes Observing System (GLOS) as the core. 2.1.4 Bi-national Program and Lakewide Management Plan Support (Lake Superior, Ontario, Erie, Huron) 2.1.5 Lake Superior Climate and Ecosystem Needs Assessment project underway in 2012	2.1.1 2013-2016 2.1.2 Ongoing 2.1.3 Ongoing 2.1.4 Ongoing 2.1.5 Ongoing	**Canada** Al Pietroniro (EC) **US** Doug Kluck, Drew Gronewold, (NOAA)	**NACSP Strategic Goals:** #1. Foster the development of key partnerships with users and stakeholders #2. Maximize the use of existing science and information by decision-makers #3. Prioritize activities based on identified gaps in service delivery and end-user input #4. Utilize regional pilot areas to implement a place-based approach **GFCS Pillar:** #1. Climate Observations and Monitoring
	2.2 Binational Great Lakes Climate Quarterly and Outlook	2.2.1 Expansion of existing NOAA regional climate quarterly product to include Canadian portion of the Great Lakes	Experimental product June 2013	**Canada** Al Pietroniro (EC)	**NACSP Strategic Goals:** #1. Foster the development of key partnerships with users and stakeholders

FOCUS AREA	OBJECTIVES	ACTIVITIES/MILESTONES	TIME FRAME	LEAD	Strategic Goal & GFCS Link
		St. Lawrence River (GLSLR) Basin, (data and text input from EC and AAFC)	Operational binational product December 2013-	**US** Doug Kluck (NOAA)	#2. Maximize the use of existing science and information by decision-makers #3. Prioritize activities based on identified gaps in service delivery and end-user input #4. Utilize regional pilot areas to implement a place-based approach **GFCS Pillar:** #3. Climate Services Information System
3. North American Ensemble Forecast System	3.1 Ensemble forecast system comparison	3.1.1 Inter-comparison for individual ensemble performance 3.1.2 Monitoring system upgrade 3.1.3 The performance of combined (multi-model) ensemble with/without statistical post processing	Continuous	**Canada** Andre Methot **Mexico** Martin Montero Rene Lobato **US** Yuejian Zhu	**NACSP Strategic Goals:** #3. Prioritize activities based on identified gaps in service delivery and end-user input **GFCS Pillar:** #2. Research, modelling and prediction
	3.2 Exchange higher resolution ensemble data	3.2.1 Exchange 0.5*0.5 degree global ensemble data between NCEP and CMC • For selected variables • For short lead time (out to 168 hours)	1-2 years	**Canada** Andre Methot **US** Yuejian Zhu	**NACSP Strategic Goals:** #3. Prioritize activities based on identified gaps in service delivery and end-user input **GFCS Pillar:** #2. Research, modelling and prediction

FOCUS AREA	OBJECTIVES	ACTIVITIES/MILESTONES	TIME FRAME	LEAD	Strategic Goal & GFCS Link
	3.3 Development/ improvement of common post process for multi-model ensemble	3.3.1 Improvement of current NAEFS SPP for selected variables (Continuous distributed variables) 3.3.2 Development of non-continuous distributed variables, such as precipitation, relative humidity.	Continuous	**Canada** Stéphane Gagnon Stéphane Beauregard **US** Bo Cui Dan Collins	**NACSP Strategic Goals:** #3. Prioritize activities based on identified gaps in service delivery and end-user input **GFCS Pillar:** #2. Research, modelling and prediction
	3.4 Development and assessment specialized products useful for decision makers	3.4.1 A set of probabilistic products: • Anomaly forecast (AF) or extreme forecast index (EFI) • Hazard probabilistic forecast products for week-2.	1-2 years	**Canada** Stéphane Gagnon Stéphane Beauregard **Mexico** Martin Montero Rene Lobato **US** Yuejian Zhu Dave Unger	**NACSP Strategic Goals:** #3. Prioritize activities based on identified gaps in service delivery and end-user input **GFCS Pillar:** #2. Research, modelling and prediction
	3.5 Expand the Data exchange to the Regional Ensemble Systems	3.5.1 Prepare and coordinate: • a common North American GRID for data exchange (format, geographical coverage, resolution); • the lead time for which the data is exchanged; • a strategy for the number of run per day, and the timing of the exchanges;	1-2 years	**Canada** Bertrand Denis Martin Charron **US** Bo Yang Jun Du	**NACSP Strategic Goals:** #3. Prioritize activities based on identified gaps in service delivery and end-user input

FOCUS AREA	OBJECTIVES	ACTIVITIES/MILESTONES	TIME FRAME	LEAD	Strategic Goal & GFCS Link
		• a common list of variable, etc.			**GFCS Pillar:** #2. Research, modelling and prediction
4. North American Seasonal Forecast System (NASFS)	4.1. Continue with current National Multi-Model Ensemble (NMME) research/experimental project towards improved seasonal forecast products over North America and continued delivery of real-time experimental products.		1 year	**Canada** Bertrand Denis Bill Merryfiled **Mexico** Martin Ibarra Ochoa Jogeluis Vazquez Aguirre **USA** Huug Vandendool Jin Huang	
	4.2. Reach mutual trilateral agreement (between Mexico, Canada and USA) about an Operational partnership on a shared Seasonal Prediction System as an outcome of NMME		9 months	**Canada** Bertrand Denis André Méthot **Mexico** Martin Ibarra choa Jogeluis Vazquez Aguirre	

FOCUS AREA	OBJECTIVES	ACTIVITIES/MILESTONES	TIME FRAME	LEAD	Strategic Goal & GFCS Link
				USA Huug Vandendool Jin Huang	
	4.3. Make the transition from NMME to Operations		1-2 years	**Canada** Bertrand Denis André Méthot **Mexico** Martin Ibarra Ochoa Jogeluis Vazquez Aguirre **USA** Huug Vandendool Jin Huang	
	4.4. Develop NMME future 5-year plan to enhance NMME capabilities to meet user needs and Evaluate the potential applications of NMME forecast from both, technical and end-user perspectives		1-2 years	**Canada** Bertrand Denis André Méthot **Mexico** Martin Ibarra Ochoa Jogeluis Vazquez Aguirre	

FOCUS AREA	OBJECTIVES	ACTIVITIES/MILESTONES	TIME FRAME	LEAD	Strategic Goal & GFCS Link
				USA Huug Vandendool Jin Huang	
5. North America Drought Monitor (NADM)	5.1. Scoping Activity: Develop a discussion paper that identifies the role of the NADM and how it links to other global drought information initiatives, programs, policy and science in North America. The analysis will be done by country (i.e., each country to contribute its own section to the paper).	5.1.1 U.S., Canada, & Mexico discuss common goals. 5.1.2 Each country writes their national section. 5.1.3 Merge the three national sections.	5.1.1. 2 months 5.1.2. 4 months 5.1.3. Complete by December 31, 2013	**Canada** Trevor Hadwen (AAFC) Allan Howard (AAFC) **Mexico** Reynaldo Pascual Adelina Albanil (SMN) **US** Richard Heim (NOAA)	**NACSP Strategic Goals:** #1. Foster the development of key partnerships with users and stakeholders #2. Maximize the use of existing science and information by decision-makers #3. Prioritize activities based on identified gaps in service delivery and end-user input #4. Utilize regional pilot areas to implement a place-based approach #5. Create opportunities to share best practices and lessons learned **GFCS Pillar:** #1. Climate Observations and Monitoring
	5.2. North American VegDRI: Expand the Vegetation Drought Reponse Index (VegDRI) drought product (which currently covers just the contiguous U.S.) to Canada and	5.2.1 Creation and Assessment of primary biophysical data sets integration in the VegDRI Model 5.2.2 Development of historical weekly SPI values and a process for calculating weekly SPI values in an operational mode. 5.2.3 Model development for Canada and	5.2.1 2 months 5.2.2 2 months 5.2.3	**Canada** Trevor Hadwen (AAFC) **Mexico** Carlos Dobler (from SIAP-SAGARPA)	**NACSP Strategic Goals:** #2. Maximize the use of existing science and information by decision-makers #5. Create opportunities to share best practices and lessons learned

FOCUS AREA	OBJECTIVES	ACTIVITIES/MILESTONES	TIME FRAME	LEAD	Strategic Goal & GFCS Link
	Mexico so that it covers the full North American continent. Canadian pilot region consists of a narrow portion of Southern Canada including portions of the Prairie Provinces, Southern Ontario and Quebec.	integration of Canadian data into the US Veg DRI model	4 months Complete Canadian expansion by March 31, 2014	**US** Brian Wadlow Tsegaye Tadesse Jesslyn Brown	**GFCS Pillar:** #1. Climate Observations and Monitoring
	5.3. North American Blended Drought Indices: Develop short- and long-term objective blended drought indices for the entire North American continent (utilizing data from Canada, Mexico, and the U.S.) patterned after the methodology for the U.S. objective blends. Will include workshops on developing, applying and transferring the blend methodology to all 3 countries.	5.3. Develop gridded data base of monthly temperature and precipitation. 5.3.2 Identify the components of the blend. 5.3.3 Test and evaluate. 5.3.4 Implement within NIDIS Portal architecture.	5.3.1. 2 months 5.3.2. 2 months 5.3.3. 2 months 5.3.4. 3 months Complete by April 30, 2014	**Canada** Trevor Hadwen (AAFC) **Mexico** Reynaldo Pascual Adelina Albanil (SMN) **US** Richard Heim (NOAA) with Russ Vose (NOAA) & Mike Brewer (NOAA)	**NACSP Strategic Goals:** #2. Maximize the use of existing science and information by decision-makers #5. Create opportunities to share best practices and lessons learned **GFCS Pillar:** #1. Climate Observations and Monitoring

FOCUS AREA	OBJECTIVES	ACTIVITIES/MILESTONES	TIME FRAME	LEAD	Strategic Goal & GFCS Link
	5.4 Drought Definitions and Indices Study: Link to the GEO North American Drought Indices and Definition study, which is developing a user toolkit consisting of a North American relevant definition for drought and identification of suitable indices. This would be a first step in development of a globally relevant definition and identification of indices.	5.4.1 Develop bibliography of drought definition literature for North America. 5.4.2 Compile list of drought indices used Prepare tool kit journal article, to be made available to all interested parties in all 3 countries. 5.4.3 Prepare tool kit journal article, to be made available to all interested parties in all 3 countries.	5.4.1. 6 months 5.4.2. 6 months 5.4.3. 3 months Complete by September 31, 2014	**Canada** Allan Howard (AAFC) **Mexico** Reynaldo Pascual Adelina Albanil (SMN) as POC one more TBD **US** Richard Heim (NOAA)	**NACSP Strategic Goals:** #1. Foster the development of key partnerships with users and stakeholders #2. Maximize the use of existing science and information by decision-makers #3. Prioritize activities based on identified gaps in service delivery and end-user input #4. Utilize regional pilot areas to implement a place-based approach #5. Create opportunities to share best practices and lessons learned **GFCS Pillar:** #1. Climate Observations and Monitoring #2. Research, modelling and prediction #5. User Interface Platform
6. Coordinated Daily Precipitation Analysis	6.1 Coordination of observations	6.1.1 Identify and share Canadian observations which should participate in the analysis 6.1.2 Identify and share US observations which should participate in the analysis 6.1.3 Identify and share Mexican observations which should participate in the analysis	6.1.1 2013 6.1.2 2013 6.1.3 2013	**Canada** Olivier Gagnon **Mexico** Hector Robles **US** Wei Shi	**NACSP Strategic Goals::** #2. Maximize the use of existing science and information by decision-makers **GFCS Pillar :** #1. Climate Observations and Monitoring

FOCUS AREA	OBJECTIVES	ACTIVITIES/MILESTONES	TIME FRAME	LEAD	Strategic Goal & GFCS Link
	6.2 Coordination of skill assessment	6.2.1 Identify a subset of stations to be used for model verification and two test periods (one in summer, one in winter) 6.2.2 Agree on a set of metrics for the evaluation of gridded precipitation analyses 6.2.3 Evaluate the Canadian precipitation analysis (CaPA) using the agreed upon metrics for the test periods 6.2.4 Evaluate the NCEP CPC precipitation analysis using the agreed upon metrics for the test periods	6.2.1 2013 6.2.2 2014 6.2.3 2014 6.2.4 2015	**Canada** Vincent Fortin **Mexico** Hector Robles **US** Wei Shi Ping Ping Xi	**NACSP Strategic Goals:** #5. Create opportunities to share best practices and lessons learned **GFCS Pillar:** #2. Research, modelling and prediction
	6.3 Coordination of methodology	6.3.1 Compare various techniques for obtaining a seamless analysis for North America 6.3.2 Compare various techniques for combining Canada and US global analyses outside of North America 6.3.3 Develop and implement a methodology for obtaining a unified precipitation analysis on a North American domain	6.3.1 2014-2015 6.3.2 2015-2016 6.3.3 2015-2016	**Canada** Vincent Fortin **Mexico** Hector Robles **US** Wei Shi	**NACSP Strategic Goals:** #5. Create opportunities to share best practices and lessons learned **GFCS Pillar:** #2. Research, modelling and prediction
	6.4 Coordination of services	6.4.1 Assess if and how a unified precipitation analysis product could contribute to the success of other NACSP projects 6.4.2 Identify requirements from other NACSP projects for a unified precipitation analysis, in terms of skill, bias, horizontal and temporal resolution, record length and timeliness 6.4.3 Ensure that the unified precipitation analysis is available to other NACSP projects in a timely manner	6.4.1 2013 6.4.2 2014 6.4.3 2015-2016	**Canada** Olivier Gagnon **Mexico** Hector Robles **US** Wei Shi	**NACSP Strategic Goals:** #2. Maximize the use of existing science and information by decision-makers **GFCS Pillar:** #3. Climate Services Information System

FOCUS AREA	OBJECTIVES	ACTIVITIES/MILESTONES	TIME FRAME	LEAD	Strategic Goal & GFCS Link
		6.4.4 Ensure that the unified precipitation analysis is available to the general public	6.4.4 2016		
7. North American Seasonal Fire Assessment and Outlook	7.1 Decision support	7.1.1 Prepare seasonal wildland fire assessments and outlooks for the fire management decision makers.	Ongoing	**Canada** Kerry Anderson (NRCan/CIFFC) **Mexico** Juan Carlos Ramos-Soto Roel Ayala **U.S.** Ed Delgado (BLM/NIFC)	**NACSP Strategic Goals:** #2. Maximize the use of existing science and information by decision-makers **GFCS Pillar:** #3. Climate Services Information System
	7.2 Products and Services	7.2.1 Develop new decision support products and services that address the changing needs of fire managers.	Ongoing	**Canada** Kerry Anderson (NRCan/CIFFC) **Mexico** Juan Carlos Ramos-Soto Roel Ayala **U.S.** Ed Delgado (BLM/NIFC)	**NACSP Strategic Goals:** #2. Maximize the use of existing science and information by decision-makers **GFCS Pillar:** #3. Climate Services Information System
	7.3 Knowledge Sharing	7.3.1 Establish dialogues with other climate experts in different focus areas.	Ongoing	**Canada** Kerry Anderson (NRCan/CIFFC)	**NACSP Strategic Goals:** #2. Maximize the use of existing science and information by decision-

FOCUS AREA	OBJECTIVES	ACTIVITIES/MILESTONES	TIME FRAME	LEAD	Strategic Goal & GFCS Link
				Mexico Juan Carlos Ramos-Soto Roel Ayala **U.S.** Ed Delgado (BLM/NIFC)	makers **GFCS Pillar:** #5. User Interface Platform

Strategic Goal & GFCS Link

NACSP Strategic Goals

1. Foster the development of key partnerships with users and stakeholders.

2. Maximize the use of existing science and information by decision-makers

3. Prioritize activities based on identified gaps in service delivery and end-user input

4. Utilize Regional Pilot areas to implement a place-based approach

5. Create opportunities to share best practices and lessons-learned

GFCS Pillars

1. Climate Observations and Monitoring

   Ensure that the climate observations necessary to meet the needs of end users are made, managed and disseminated, supported by relevant metadata.

2. Research, modelling and prediction

   Foster research, modelling and predictions capabilities towards continually improving the scientific quality of climate information.

3. Climate Services Information System (incl. products and services)

   Support mechanisms where climate (past, present and future) will be routinely collected, stored and processed in various climate services information systems to generate products and services that inform often complex decision making across a wide range of climate-sensitive activities and enterprises.

4. Capacity Development

   Strengthen existing capabilities that are needed to enable all countries to manage climate risk effectively (includes governance, management, human resources development, education and training, leadership, partnership creation, science communication, service delivery, resource mobilization and infrastructure)

5. User Interface Platform

   Provide a structured means for users, climate researchers and climate data and information providers to interact at all levels.